

APCO | HILTON

DeZURIK VENDOR INSTRUCTIONS

MAC 800 & 1800 SERIES PILOT VALVES

Instruction DP00128
June 2011

MAC 800 SERIES

Patents and Patents Pending

SUPPLEMENTAL TECHNICAL DATA

SPECIAL APPLICATIONS:

On all single pressure models, energizing the operator closest to port #5 supplies pressure to cylinder port "2" and energizing the operator closest to port #4 supplies pressure to cylinder port "3". For the following special applications, additional piping considerations are required.

EXTERNAL PILOT APPLICATIONS: An External Pilot is only required when the main valve pressure is less than 20 PSIG on single solenoid or 10 PSIG on double solenoid valves in 2-position models, or less than 20 PSIG on 3-position double solenoid models. Also an External Pilot is required when main valve pressure is in excess of 150 PSIG.

* **INDIVIDUAL VALVES:** The External Pilot supply is connected to the External Pilot port in the piston adapter. The valve must be an External Pilot model.

* **STACKING VALVES:** The External Pilot supply is connected to the External Pilot ports in the end plates. The valve is the same valve for either Internal or External Pilot. The end plates must be the external pilot type.

DUAL PRESSURE (TWO INLET) APPLICATIONS: When two pressures are required within a valve, a Dual Pressure (Inlet) model must be used. Additionally the following must be adhered to:

INDIVIDUAL VALVES: If both pressures are below the minimum, use an External Pilot supply as described above for Individual valves and connect the two pressures to ports #4 and #5. Otherwise, use an Internal Pilot model and connect the higher pressure to port #5 and the lower pressure to port #4.

STACKING VALVES: Use an External Pilot Manifold End Plate Kit, as described above for Stacking Valves and connect the two pressures to the two Exhaust ports in the end plate.

MULTIPLE PRESSURES TO A STACK: By isolating, different pressure can be supplied to each end of a stack to provide two pressures. If more than two pressures are required, a Dual Inlet Pressure Block can be installed providing 2 more inlet pressures to a stack. With the use of 1 or more of these Pressure Blocks, a stack can have virtually

unlimited inlet pressures (See "Accessories" under "How to Order" for ordering information).

VACUUM APPLICATIONS: Use an External Pilot model as described above under "External Pilot Applications", (Individual valve or Stacking).

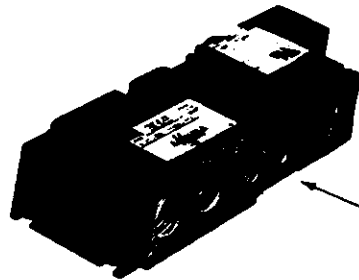
For single pressure, dual exhaust type valves, ports #4 & #5 (Exhausts) should be connected to the vacuum supply and port #1 (Inlet) to atmosphere.

For dual pressure, single exhaust type valves, vacuum should be connected to port #1 (Inlet) and ports #4 & #5 (Exhausts) to atmosphere.

SELECTOR APPLICATIONS: Use an External Pilot model as described above, if both pressures are below the minimum pilot pressure; otherwise use an Internal Pilot model. In either case, use a single pressure model and connect the higher pressure to port #1 (Inlet) and the lower pressure to port #4 (Exhaust) if using cylinder port #2 or to port #5 (Exhaust) if using cylinder port #3.

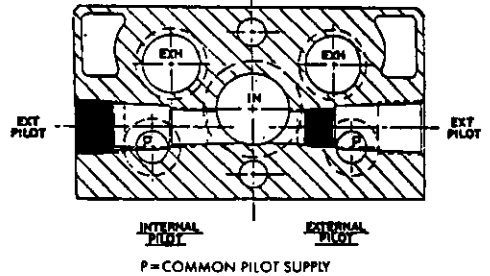
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INDIVIDUAL VALVES



* EXTERNAL PILOT APPLICATIONS

STACKING VALVE END PLATE



SPOOL CONFIGURATIONS

2-POSITION SGL. PRESSURE
(SPOOL #12184)
B ACTUATED SHOWN



2-POSITION DUAL PRESSURE
(SPOOL ASSY. #10266)
B ACTUATED SHOWN



3-POSITION SGL. PRESS. CLOSED CENTER
(SPOOL ASSY. #S-00004)
CENTER POSITION SHOWN



3-POSITION SGL. PRESS OPEN CENTER
(SPOOL ASSY. #S-00003)
CENTER POSITION SHOWN



3-POSITION SGL. PRESS. PRESSURE CENTER
(SPOOL ASSY. #S-08003)
CENTER POSITION SHOWN



3-POSITION DUAL PRESS. PRESSURE CENTER
(SPOOL ASSY. #S-08002)
CENTER POSITION SHOWN



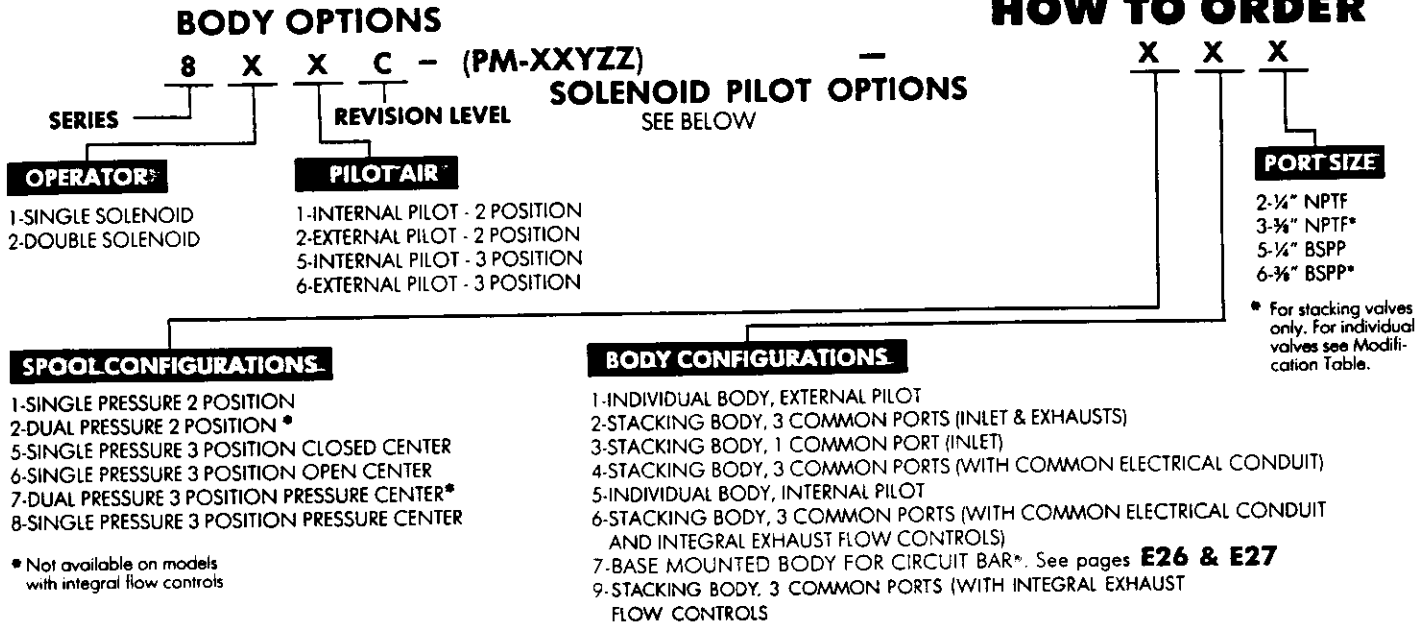
NOTE:
BODIES SHOWN
ARE INTERNAL PILOT

Consult "Precautions" on inside back cover before use, installation or service of MAC Valves.

FOR CIRCUIT BAR® VERSION OF THIS SERIES, SEE SECTION E.

MAC 800 SERIES

HOW TO ORDER



SOLENOID PILOT OPTIONS

XX - XX Y ZZ

XX PILOT EXHAUST	XX AC VOLTAGE	XX DC VOLTAGE	Y MANUAL OPERATORS	Y MANUAL OPERATOR W/INDICATOR LIGHT	ZZ ENCLOSURE
PM Pilot Exh.-Muffled	11 120/60, 110/50	50 24 VDC (6W)	0 No Operator	5 No Operator with Light ①	AA JIC w/1/4" NPS Conduit
PP Pilot Exh.-Piped	12 240/60, 220/50	55 12 VDC (6W)	1 Non-Locking Recessed (Std.)	6 Non-Locking Recessed w/Lgt. ①	BA Grommet
	22 24/50-60	57 12 VDC (2.5W)	2 Locking Recessed	7 Locking Recessed w/Lgt. ①	CA Conduit 1/2" NPS
	39 240/50	59 24 VDC (2.5W)	3 Non-Locking Extended	8 Non-Locking Extended w/Lgt. ①	CC Conduit 1/2" NPT (CSA Threads)
		60 12 VDC (8.5W)	4 Locking Extended	9 Locking Extended w/Lgt. ①	DA Com. Conduit Stacking Only
		61 24 VDC (8.5W)			RA Conduit 3/4" NPS (Stacking)

Other AC & DC Voltages Available. DC Wattages from 1.0 to 17 watts. See Page T-2 or Consult factory.

① Lights are available for 120/60, 110/50 or 240/60, 220/50 or 24VDC with JIC enclosure only (AA).

External plug-ins available. See Page T-3 or Consult Factory.

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ACCESSORIES

MANIFOLD END PLATE KITS (NPTF)*

INT. PILOT PART NO.	EXT. PILOT PART NO.	MODELS USED WITH
M-08001-01-01	M-08001-02-01	3 com. port or 1 com. port models, stacks of 1 thru 16 valves.
M-08002-01-01	M-08002-02-01	Com. conduit models, stacks of 1 thru 16 valves.
M-00005-01-01	M-00005-02-01	3 com. port or 1 com. port models, stacks of 17 or more valves.
M-00007-01-01	M-00007-02-01	Com. conduit models, stacks of 17 or more valves.

* Add letter P at end of part No. for BSPP Threads; EXAMPLE: M-08001-01-01P

ISOLATORS — Sections of a gang may be isolated permitting different pressures to be fed to either end of the gang. Part # N-08001 (inlet), N-08002 (exhaust).

FLOW CONTROL & MUFFLER — 1/4" unit for installing in individual Exhaust ports. Part # 10951

DUAL INLET PRESSURE BLOCK — For 3 common ports or 1 common port stacking valves. Provides 2 additional inlet pressure ports to a stack.

Part #M-08003
For Common Conduit Valves
Part #M-00014

MODIFICATIONS

MOD. NO.	DESCRIPTION	MODEL AVAILABILITY
0387	Indicator light 24VDC	Single & double solenoid common conduit only
0295	Indicator light 120V/60/50	
0296	Indicator light 240V/60/50	
0368	3/4" inlet and cylinder parts	Individual valves

TO ORDER — Add the appropriate modification number after the valve number;
EXAMPLE 811C-PM-111DA-142 MOD 0295.

For additional modifications see Technical Section.

Certain MAC Valves are approved by U.L. & C.S.A. For details see Technical Section. Consult "Precautions" on inside back cover before use, installation or service of MAC Valves.

NAMUR Interface

The Namur Interface is a general working standard for measurement & control techniques in the process control industry.

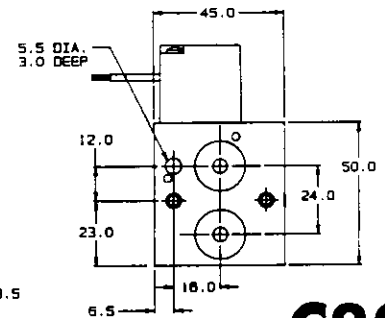
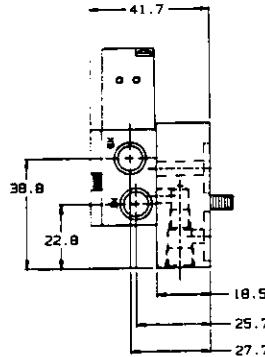
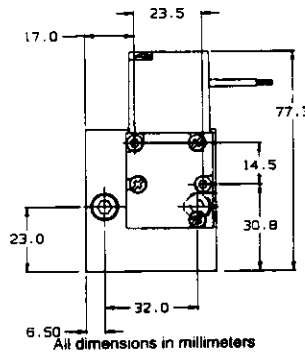
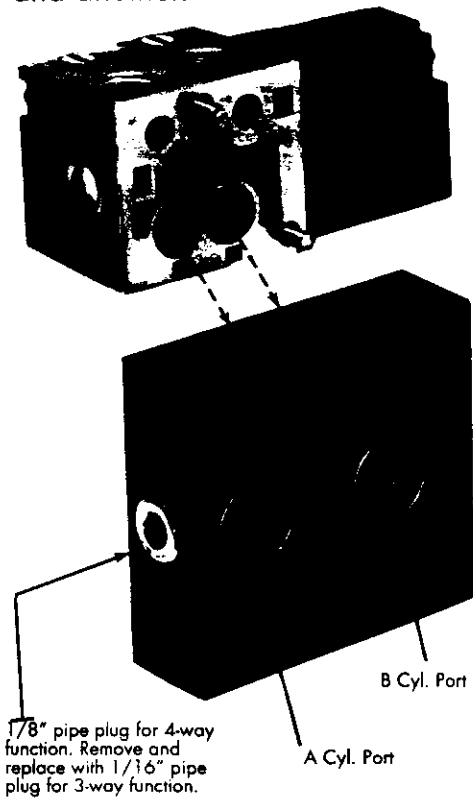
The Namur Standard is an interface for a 3-way or 4-way, single or double solenoid air control valve. It consists of two drilled orifices to correspond to the valve cylinder ports, and four mounting holes. Two of the holes are used to mount the valve to the actuator, while one of the remaining two holes is for a locating pin. Like other interfaces, (i.e. ISO Series), it permits interchangeability between one make of air valve and another.

45 SERIES

The 45 Series inline valve utilizes a Namur Interface Adapter Plate. This Adapter Plate enables a 45 Series inline body with bottom O-ring mount cylinder ports (45A-FA1 body) to mount to the Namur Interface. To attach this assembly to an actuator, the Adapter Plate must first be mounted to the actuator, then the valve to the plate. Two types of interface plates are available, one for 3-way use and another for 4-way applications. These plates can be converted from 3-way to 4-way or vice-versa by simply installing the correct pipe plug.

NAMUR ADAPTER KIT

N-45028-03 for 3-way operation
N-45028-04 for 4-way operation



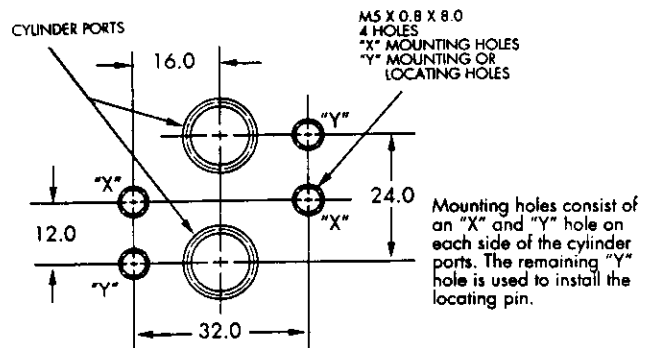
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800 SERIES

The 800 Series individual body can be modified to match the Namur Interface by specifying MOD.1080 after the valve model number. This modification consists of a special machined body with standard cylinder ports plugged and two drilled countersunk holes on the side of the body and a machined hole for a locating pin. Two O-ring seals and the locating pin are supplied with the valve. The locating pin can be installed in one of two places depending on the orientation of the valve. The pin is designed to prevent the valve from being mounted 180 degrees from its correct position..



811C-PM-111CA-152 MOD. 1080



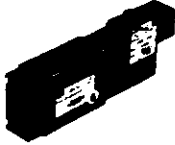
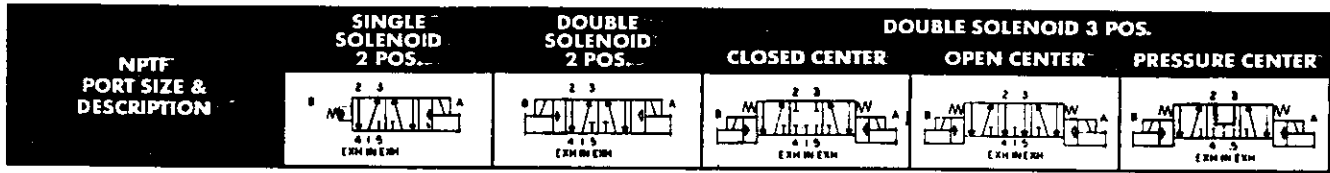
NAMUR Interface

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MAC 800 SERIES

4-WAY, SOLENOID PILOT OPERATED,
INDIVIDUAL INLINE AND STACKING BODIES
1/4", 3/8" - Cv UP TO 1.4
PRESSURE RANGE: VACUUM TO 200 PSI (SEE OPERATING DATA)

Patents and Patents Pending



INDIVIDUAL BODY MODELS

1/4" INT. PILOT SGL INLET	811C-PM-111BA-152	821C-PM-111BA-152	825C-PM-111BA-552	825C-PM-111BA-652	825C-PM-111BA-852
1/4" EXT. PILOT SGL INLET	812C-PM-111BA-112	822C-PM-111BA-112	826C-PM-111BA-512	826C-PM-111BA-612	826C-PM-111BA-812



STACKING BODY - 3 COMMON PORTS W/COMMON CONDUIT

1/4" 4 WAY SGL INLET	811C-PM-111DA-142	821C-PM-111DA-142	825C-PM-111DA-542	825C-PM-111DA-642	825C-PM-111DA-842
3/8" 4 WAY SGL INLET	811C-PM-111DA-143	821C-PM-111DA-143	825C-PM-111DA-543	825C-PM-111DA-643	825C-PM-111DA-843

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STACKING BODY - 3 COMMON PORTS W/COMMON CONDUIT W/INTEGRAL EXH. FLOW CONTROLS

1/4" 4-WAY, SGL INLET	811C-PM-111DA-162	821C-PM-111DA-162	825C-PM-111DA-562	825C-PM-111DA-662	825C-PM-111DA-862
3/8" 4-WAY, SGL INLET	811C-PM-111DA-163	821C-PM-111DA-163	825C-PM-111DA-563	825C-PM-111DA-663	825C-PM-111DA-863



STACKING BODY - 3 COMMON PORTS (INLET & EXHAUSTS)

1/4" 4-WAY, SGL INLET	811C-PM-111BA-122	821C-PM-111BA-122	825C-PM-111BA-522	825C-PM-111BA-622	825C-PM-111BA-822
3/8" 4-WAY, SGL INLET	811C-PM-111BA-123	821C-PM-111BA-123	825C-PM-111BA-523	825C-PM-111BA-623	825C-PM-111BA-823



STACKING BODY - 3 COMMON PORTS W/INTEGRAL EXH. FLOW CONTROLS

1/4" 4-WAY, SGL INLET	811C-PM-111BA-192	821C-PM-111BA-192	825C-PM-111BA-592	825C-PM-111BA-692	825C-PM-111BA-892
3/8" 4-WAY, SGL INLET	811C-PM-111BA-193	821C-PM-111BA-193	825C-PM-111BA-593	825C-PM-111BA-693	825C-PM-111BA-893



STACKING BODY - 1 COMMON PORT (INLET)

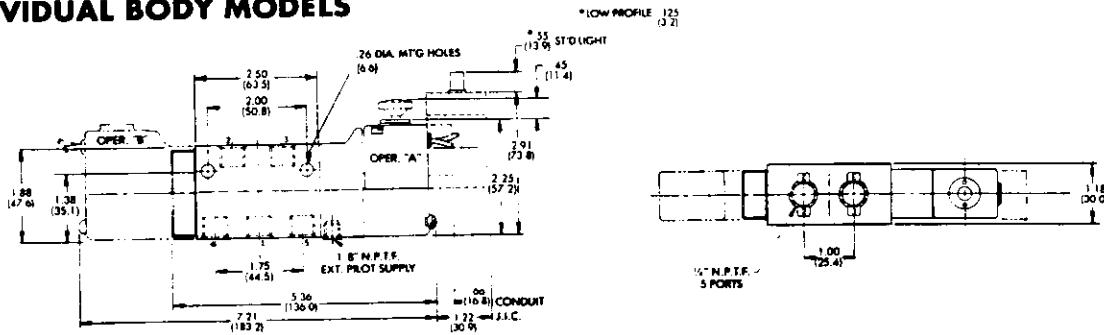
1/4" 4-WAY, SGL INLET	811C-PM-111BA-132	821C-PM-111BA-132	825C-PM-111BA-532	825C-PM-111BA-632	825C-PM-111BA-832
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Valve codes shown are for 120/60, 110/50 coils, non-locking recessed manual operators and grommet type electrical connections.

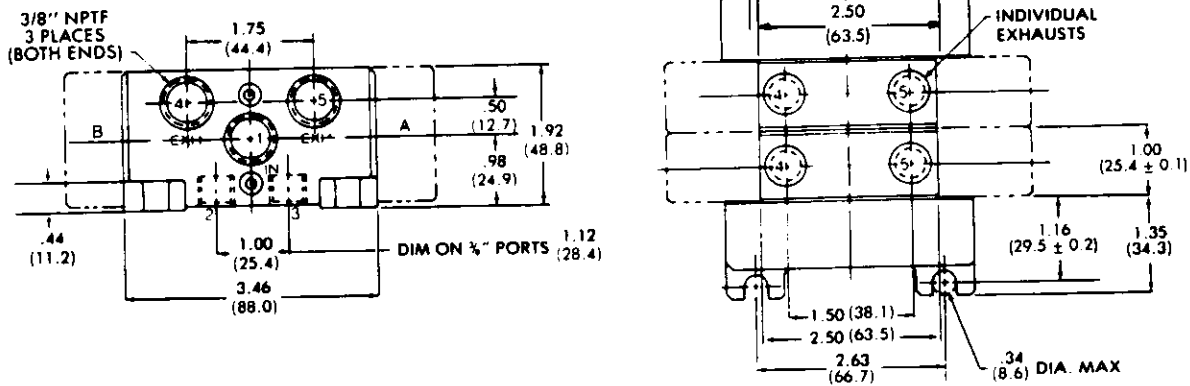
All MAC Valves available with BSPP threads: to order see opposite page.
Consult "Precautions" on inside back cover before use, installation or service of MAC Valves.

DIMENSIONS 800 & 1800 SERIES

INDIVIDUAL BODY MODELS

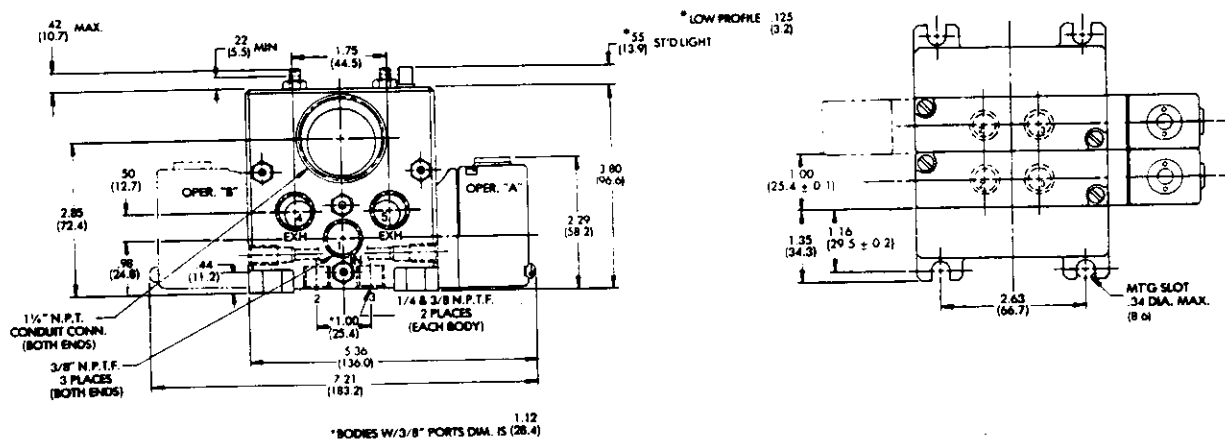


STACKING (STYLE A END PLATE KIT)

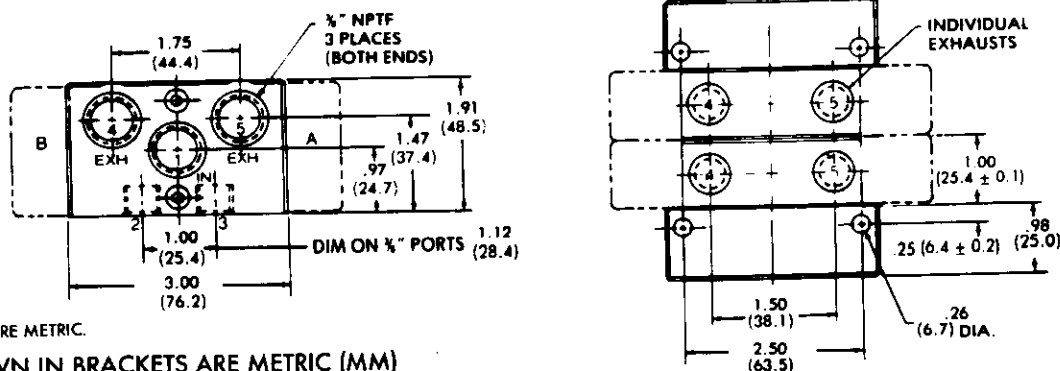


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STACKING VALVES — COMMON CONDUIT



STACKING (STYLE B END PLATE KIT)



GOLD FASTENERS ARE METRIC.

DIMENSIONS SHOWN IN BRACKETS ARE METRIC (MM)